A Replica of an Early Pilgrim House, Plymouth, Mass. *(Courtesy of R. W. Abbott)*

Monthly Review

Federal Reserve Bank of Boston

## Industrial Opportunities in New England

# IRON AND STEEL

**Demand for iron and steel used by New England metal fabricators substantially exceeds the productive capacity of existing regional producers of carbon steel. Most of the region's market demands must be filled by purchase of steel from distant mills and by shipping it to New England fabricators at transportation rates which are more than 59 per cent higher than in 1945. On the basis of a freight advantage or freight equality, a New England mill could plan on a market for 50 to 60 thousand tons of alloy steel bars and shapes and 90 thousand tons of carbon steel bars annually.**

**A small specialty steel mill with a capacity of 400 tons a day could be kept operating continuously supplying this demand. An electric-furnace mill using an all-scrap charge and concentrating on the smaller-sized bars, angles, and strip would be able to reduce capital investment and achieve economies by eliminating a series of size-reducing mills used in large operations.**

**Moderate initial capital costs, competitive production costs based on the use of scrap from New England sources, and favorable market prospects all indicate that a specialty steel mill producing about 400 tons daily could be profitable in New England and would benefit the region greatly.**

One of the oldest types of manufacturing activity in New England is the basic-metals industry. Few Americans realize, for example, that the first iron works in what was much later to become the United States was established in Saugus, Massachusetts, in 1643. That plant produced the first dies for coining colonial money, the first fire-fighting pumping engine, the first iron kettles for home cooking, together with the first metal anchors, cranes, and other products to fill the colonists' needs. By 1650, the enterprising settlers, who had brought skilled iron workers from England, had increased the original output to the point that the company was able to enter foreign export markets.

Today the basic-metals group includes establishments engaged in smelting ore and refining both primary and scrap metals; in rolling, drawing, and alloying those metals; and in manufacturing castings, forgings, and other products.

At present the basic-metals group provides jobs for an estimated 69 thousand New Englanders, compared to only 44 thousand workers in 1939, an increase of about 57 per cent. This compares with a national expansion in the same industry group of 70 per cent in the same period. The failure of the New England industry to grow as rapidly as that elsewhere is largely due to the inadequacy of basic steel production within the region.

The most important metals industries to New England are those which roll, draw, and alloy nonferrous metals. Establishments of this kind account for slightly more than one-third of the industry's total employment. Wire drawing and iron and steel foundries follow, each accounting for one-sixth of the industry's employment. The region is very lightly represented in the important category of blast furnaces, steel works, and rolling mills, which for the United States provides one-half of total employment in the primary-metals industry.

Past attempts to secure a large integrated steel mill for New England have been based upon a recognition of this serious gap in the region's industrial plant. The discovery and development of extensive foreign iron-

**This article is the fourth in a series of abstracts from the Arthur D. Little, Inc., study of Industrial Opportunities in New England. A reproduction of the complete study may be obtained for $2.00 on request to the Research and Statistics Department, Federal Reserve Bank of Boston, 30 Pearl Street, Boston 6, Massachusetts.**

ore bodies lent encouragement to the possiblity. Such a mill would, however, come into direct competition with newly expanded East Coast steel facilities, which have at least two million tons a year of additional capacity. These expansions have taken place principally at Sparrows Point, Maryland, and Morrisville, Pennsylvania. In addition, National Steel Company has purchased land in Paulsboro, New Jersey, and although no plans have been announced, it is probable that a large integrated plant will later be built at that location.

New England is the largest industrialized region of the United States without nearby steel-producing facilities capable of supplying most of its needs. Although new steel-making capacity is under construction in Eastern Pennsylvania and elsewhere, freight costs to New England currently place the region's metalworking industries at a disadvantage of from $9.45 to $12.20 a ton of raw material, as compared to their competitors located closer to steel centers.

Between 1947 and 1951, the establishment of a large integrated steel mill in New England was under careful investigation by a group of leading New England businessmen. A certificate of necessity for a $228 million integrated mill was obtained, but the group was not successful in securing the participation of a large existing steel company in the establishment of such a mill. The need of New England for an integrated steel mill has been explored so extensively that it appears to be pointless to review such exploration in this report.

### *A Specialty Steel Mill*

Specialty steels may be defined as high-carbon steels, tool steels, and alloy steels having special properties or characteristics.

New England is a large importer of high-carbon and alloy steels which are in strong demand by the metalworking trades of this region. A small plant producing a limited tonnage of such steel products would find a ready market in New England, and especially in the Boston area. There is also reason to believe that a specialty steel mill could serve this market profitably and benefit the region greatly.

Such a mill could be based on electric furnaces melting a scrap charge. In an accompanying merchant mill it would be possible to roll carbon and alloy bars and bar shapes and possibly other alloy shapes. Such a plant could produce round, square, and hexagonal bars up to two or two and a half inches in diameter; angles, beams and channels up to three inches; and flats and strip four or five inches in width and up to one-fourth inch in thickness. It would not be able to produce the larger bar sizes and shapes, rail, plate, nor any of the variety of products which a large integrated mill could manufacture. The economics of the small specialty mill would be based on the elimination of the series of size-reducing mills used in large operations. The small merchant mill would use billet-sized ingots which could be rolled directly into semi-finished or finished products without intermediate size reductions.

A small mill designed to serve part of the New England market for specialty steel may well be economically feasible. Such a mill could be profitable in New England, based on new analyses of market demand, competing sources of supply, and production costs.

**TABLE 1**

**STEEL CONSUMPTION OF METAL FABRICATING ESTABLISHMENTS IN NEW ENGLAND, BY INDUSTRIES, 1947**

*(Tons)*

| *Area* | *Carbon Bars & Bar Shapes* | *Alloy Bars & Bar Shapes* | *Other Alloy Shapes* | *Stainless Steel* |
|---|---|---|---|---|
| **UNITED STATES** | **5,728,864** | **1,672,042** | **815,130** | **197,902** |
| **New England** | **273,175** | **75,586** | **61,345** | **12,316** |
| **Maine** | **12,065** | * | — | * |
| **New Hampshire** | **4,760** | * | * | **331** |
| **Vermont** | **5,599** | **3,495** | * | * |
| Machine tools | 1,980 | 3,049 | — | — |
| **Massachusetts** | **141,755** | **24,647** | **36,807** | **7,038** |
| Hand tools, n.e.c. | 6,197 | 905 | * | — |
| Hardware, n.e.c. | 3,468 | * | * | * |
| Structural and ornamental products | 15,564 | * | * | * |
| Boiler shop products | 1,195 | — | — | 1,112 |
| Metal stamping | * | * | — | 316 |
| Bolts, nuts, washers and rivets | 1,637 | * | — | 129 |
| Screw machine products | 7,601 | * | — | * |
| Machine tools | 1,097 | * | — | — |
| Cutting tools, jigs, etc. | 1,710 | 4,626 | * | — |
| Textile machinery | 34,681 | * | * | 944 |
| Special industrial machinery, n.e.c. | 2,615 | 785 | * | * |
| Industrial trucks and tractors | 1,618 | — | — | * |
| General industrial machinery, n.e.c. | 1,205 | — | * | 432 |
| Valves and fittings, except plumbers' | * | — | 25,026 | * |
| Transformers | * | — | — | — |
| Motorcycles and bicycles | 2,472 | * | * | — |
| Forgings | 30,691 | — | 4,278 | 355 |
| **Rhode Island** | **22,939** | **2,438** | **196** | **361** |
| Structural and ornamental products | 1,618 | * | — | * |
| Bolts, nuts, washers and rivets | 8,638 | * | * | 355 |
| **Connecticut** | **86,057** | **42,651** | **23,913** | **4,306** |
| Hand tools, n.e.c. | — | * | * | 111 |
| Hardware, n.e.c. | * | * | — | 1,037 |
| Bolts, nuts, washers and rivets | 3,811 | 2,712 | * | * |
| Screw machine products | 4,695 | 556 | * | * |
| Machine tools | 2,965 | 2,651 | * | * |
| Cutting tools, jigs, etc. | 3,016 | 1,268 | * | * |
| Ball and roller bearings | 27,762 | 24,447 | 11,115 | 197 |
| Forgings | 10,370 | 1,586 | 6,128 | 105 |
| **New York City Area** | **55,163** | **7,411** | **3,913** | **3,040** |
| **Northeastern New Jersey** | **107,176** | **27,148** | **14,374** | **5,943** |
| **Albany-Schenectady-Troy** | **28,862** | * | **2,018** | **2,284** |

*Withheld to avoid disclosing data for individual companies.

*Note:* Only users of more than 50 tons of carbon steel, 25 tons of alloy steel, or 10 tons of stainless steel were reported.

*Source:* American Iron and Steel Institute tabulation from *Census of Manufactures, 1947.*

### *Market*

The size of the market available to a specialty steel mill located in New England can be estimated by analyzing special tabulations of census data prepared for the American Iron and Steel Institute. Though there has been a marked upturn in steel output because of recent wartime demands, the year 1947 was close to the average performance of the period 1946-1951. Table 1 shows steel consumption in 1947, by areas within the New England market and by user industries, for only that part of the steel consumed within the region by larger companies. The 1947 Census of Manufactures, from which these data were derived, accounted for 73 per cent of the national total of steel consumed and 62 per cent of the alloy-steel consumption. Subsequent estimates of the New England market are based on the assumption that similar percentages of consumption were represented by data reported for this area. Actually, because of the large number of small firms in New England, our market estimates may be too low.

The alloy-bar and bar-shape market carries a favorably high operating profit margin. The total New England market for alloy bars and bar shapes is about 122 thousand tons a year. Of this market, about 56 per cent, or 69 thousand tons, is in Connecticut and the remaining 53 thousand tons are used in the other five states. The Rhode Island market is almost completely in the Providence area. The Massachusetts market is largely in the eastern part of the state. There is almost no market in Maine and New Hampshire. In Vermont it amounts to some five thousand tons a year. The Vermont market could probably not be economically supplied by a New England steel mill because of present competion, but that market is too small to affect the general picture appreciably.

On the basis of enjoying either a freight advantage or freight equality to practically the entire New England alloy-bar market, plus the fact that an electric-furnace shop can produce any required grade of alloy steel, it seems reasonable to assume that a steel plant in eastern Massachusetts would be in a position to take perhaps half the alloy-bar market, from 50 to 60 thousand tons a year.

Although it is possible to operate a profitable small electric-furnace mill producing 50 to 60 thousand tons of finished alloy steel a year, the production of carbon bars and bar shapes, together with alloy-steel products in the same plant, is well worth consideration. There is a substantial market for carbon steel bars in New England, particularly in the area close to Boston. Assuming that Table 1 accounts for 73 per cent of the total New England consumption, the New England market for carbon bars is about 375 thousand tons per year. Of this market, 65 per cent or 240 thousand tons is consumed annually within approximately 50 miles of Boston. The size of this market as compared with the alloy market suggests that part of the production of a small steel mill might be carbon bars and bar shapes.

In a mill producing 50 to 60 thousand tons a year of alloy bar products, the rolling mill would operate about one shift a day on those products. Thus, idle time on the rolling mill is available for carbon bar production. About 90 thousand tons of carbon bars (25 per cent of the available market) could, therefore, be produced annually, keeping the mill operating almost continuously. This would reduce both capital and operating costs per ton of finished steel. If a greater tonnage of steel were produced, it might be profitable to invest in a mill that could roll a wider range of products.

Some of the stainless steel market might be served by a New England mill. However, stainless steel is currently being produced in East Central New York state, not far from the New England market. A continuous casting unit, the first full-scale commercial installation for the steel industry, is under construction at this plant. In addition, the total New England stainless steel market is relatively small. Therefore, it does not appear worth while to consider the production and fabrication of stainless steel.

Table 1 shows the consumption of carbon bars, alloy bars, other alloy shapes and stainless steel by the principal industrial groups in New England. The Census of Manufactures also gives the dollar value of the principal products produced by the metal-fabricating industries of New England. When used together, this information forms a basis for determining the types of alloy steel in reasonable demand in this area and permits identification of the industries consuming them. Thus, it is possible to determine roughly what types of alloy steel the suggested mill might produce for this market.

The largest single consumer of alloy bars in New England is the ball- and roller-bearing industry in Connecticut. The bulk of the steel required by this industry is Type 52100 bars, a chromium steel used in the manufacture of balls and races.

The remainder of the market would require a variety of types of alloy steel, but undoubtedly the common types of alloy steel would satisfy the bulk of the market. To determine relative quantities of the common alloy types needed is unnecessary, since all types of alloy bars could be produced readily.

The annual capacity of a steel plant well suited to the present New England market would be approximately 140 thousand tons. Such a mill would make each year about 50 thousand tons of alloy steel and 90 thousand tons of carbon steel. There would appear to be little difficulty in selling the output of a mill of this size to users now in the New England area. It should be recognized, moreover, that the establishment of a small steel mill in New England would, in the course of time, create a larger market in this region for its products. New metal fabricating companies would spring up, and established companies would expand. This has invariably been the experience in other areas where new steel-making facilities have been established. The metal-fabricating industry in New England has in recent years been expanding. Thus, the demand for steel in this area is increasing and is undoubtedly larger today than it was in 1947.

### *Competition*

An examination of the possibilities of establishing a small specialty steel mill in New England requires going beyond the region's demand for steel and examining current suppliers with an eye toward their competitive effects on the sales potential of a new mill.

There are currently four companies in New England

that operate primary steel-producing facilities. One of these, the Mystic Iron Works, located in Everett, Massachusetts, operates the region's only blast furnace. The other companies produce only open-hearth steel, and each has its own rolling mill.

Table 2 lists the primary-steel producers now in New England and adjacent areas, the number and type of steel-producing furnaces each operates, and their annual ingot capacity. The New England ingot capacity amounts to 556 thousand tons, but the finished steel capacity is only about 315 thousand tons per year. The production of American Steel and Wire and Washburn Wire is almost exclusively wire rods and wire, although a small quantity of strip is produced by Washburn Wire. Stanley Works uses most of its primary production in its own tool and hardware manufacturing plants, but it markets some cold-rolled strip.

In addition to the shapes made by the primary-steel producers in New England, there are a number of companies in the area that operate small finishing mills to produce specialized grades and forms of steel. These companies buy strip, bars, etc., from primary producers in New England and elsewhere and cold finish them to produce special sizes and finishes on ordinary steel products. Although there are more than twenty finishing mills in the area, their annual tonnage of products made is small and has little effect on supplying the total market. Republic Steel's subsidiary, Union Drawn Steel Division, for example, has a finishing plant in Hartford, Connecticut, that cold finishes alloy bars made outside New England to supply the local market. A steel plant in New England, however, could supply many of these finishing mills with steel for further processing.

The most severe potential competition which a New England mill would probably encounter is in the sale of carbon bars. Although only a very small tonnage of carbon bars is presently being produced for direct sale by American Steel and Wire at its Worcester plant, if the market for wire and wire products were to weaken, the production of carbon bars might be attractive, and the switch could be made easily with existing facilities. Under normal conditions, however, American Steel and Wire would presumably prefer to produce wire products.

About 85 per cent of the Connecticut market for alloy bars is in the Hartford-New Britain-Bristol area. The American Steel and Wire Company in Worcester, Massachusetts, is the only present producer of this type of bar in the region. The usual range of alloy bars is not produced at the American Steel and Wire plant at Worcester, and it is possible for that plant to produce only certain types of low-alloy bars. The actual competition is from producers outside New England.

Possible competition comes from existing plants in Bethlehem and Morrisville, Pennsylvania. Since a New England mill would enjoy a freight advantage in the large Connecticut market, it is reasonable to assume that the mill could capture a good portion of the alloy bar market there. The possibility that freight rates to Connecticut might be equalized from a New England mill and from existing plants in Bethlehem and Morrisville, Pennsylvania, should not be overlooked, even though the latter two plants are at a greater distance from the Connecticut market. Such a freight-rate structure would not put a New England mill at a disadvantage, but it would create more competition in New England and reduce the area of freight-rate advantage.

**TABLE 2**

**STEEL PRODUCTION CAPACITY IN NEW ENGLAND AND ADJACENT AREAS, 1951**

| *Location and Company* | *Ingot Capacity* | | *Finished Steel Capacity* | |
|---|---|---|---|---|
| | *Number and Types of Furnaces* | *Annual Ingot Capacity (tons)* | *Products* | *Annual Capacity (tons)* |
| **New England** | | | | |
| American Steel & Wire, Worcester, Mass. | 4 O.H. | 275,000 | Wire & wire rods | 200,000 |
| Stanley Works, Bridgeport, Conn. | 3 O.H. | 188,000 | Cold rolled strip | 55,000 |
| Washburn Wire, Phillipsdale, R. I. | 4 O.H. | 93,000 | Billets, strip, wire & wire rods | 60,000 |
| **New Jersey** | | | | |
| Crucible Steel, Harrison | 12 Elec. | 2,160 | Cold rolled & cold drawn specialty products | 2,000 |
| John Roebling's Sons, Trenton | 9 O.H. | 204,870 | Wire rope, etc. — acid & basic O.H. steel | 165,000 |
| **New York** | | | | |
| Crucible Steel, Syracuse | 7 Elec. | 59,600 | Tool, corrosion & heat resistant steel, drill rod & fine wire products | 45,000 |
| Allegheny Ludlum, Watervliet | 3 Elec. | 72,000 | Stainless steel | 20,000 |
| **Pennsylvania** | | | | |
| Bethlehem Steel, Bethlehem | 32 O.H.<br>8 Elec. | 2,970,000<br>158,000 | All shapes | 2,500,000 |
| Alan Wood, Philadelphia | 8 O.H. | 625,000 | Sheet, plate, nails, strip, billets | 450,000 |
| Carpenter Steel, Reading | 7 Elec. | 81,360 | Tool, die, stainless, specialty steels: alloy tube and wire | 65,000 |
| Phoenix Iron & Steel, Phoenixville | 6 O.H. | 431,430 | Structural shapes | 195,000 |
| Lukens Steel, Coatesville | 12 O.H. | 675,000 | Wide plate, clad steels, spun & pressed heads | 600,000 |
| Boiardi Steel, Milton | 2 Elec. | 53,675 | Specialty electric steels | 45,000 |
| U. S. Steel, Morrisville | 9 O.H.* | 1,800,000* | All shapes | 1,500,000* |
| **Maryland** | | | | |
| Bethlehem Steel, Sparrows Point | 28 O.H.<br>3 Elec. | 5,064,000<br>336,000 | All shapes | 4,320,000 |
| **Delaware** | | | | |
| Worth Steel, Wilmington | 7 O.H. | 468,000 | All shapes | 370,000 |

* Estimated capacity on completion of present construction.
Source: American Iron and Steel Institute.

### *Production Costs*

The refining of steel can be accomplished in either the open hearth or the electric furnace. Recent changes in the comparative economics of the two make the electric furnace a logical choice for New England. Primarily due to increases in open-hearth operating costs and the improved design and operation of electric-arc furnaces, the modern arc furnace under most conditions can compete economically with the modern open hearth. The electric furnace has a definite advantage in meeting smaller tonnage requirements where cold-melt open-hearth furnaces would otherwise have to be used. The electric furnace is especially well suited to the production of high carbon and alloy steels. When set up in a steel-consuming center located at some distance from fully integrated open-hearth plants, the electric furnace plant has a competitive advantage. This advantage is intensified when the furnace is used in combination with billet-type carbon-steel ingots and the fast continuous mill for direct rolling of these ingots into merchantable products. Capital expenditures are reduced by eliminating a series of heavy size-reducing mills.

Operating costs, including power and fuel, labor, maintenance, relining provisions, etc., are equal or lower for the electric furnace. Of great added importance, the first cost of the electric-furnace shop is only about half the capital investment required for the equivalent open-hearth capacity. In addition, the electric furnace is more versatile, and a wider range of steel types can be made. These advantages favor the use of an electric furnace for refining steel in New England.

There are three methods by which electric furnace steel is currently made:

1. By use of a high percentage (80 per cent) of hot metal, partially refined in a Bessemer converter and finish refined in an electric furnace.
2. By use of a 30 per cent hot metal and 70 per cent scrap refined in an electric furnace.
3. By use of an all-scrap charge refined in an electric furnace.

Based on operating-cost data available in recent literature with electric power at nine mills per kw-hr and scrap and hot metal at current market prices, the averaged total manufacturing costs for electric furnace carbon steel would be roughly as follows:

1. By use of 80 per cent hot metal and 20 per cent scrap — $92 per ton of finished product.
2. By use of 30 per cent hot metal and 70 per cent scrap — $83 per ton of finished product.
3. By use of all scrap — $76 per ton of finished product.

If electric power could be obtained for seven mills per kw-hr instead of nine mills, the cost of producing carbon steel would be reduced by about 70 cents a ton in the case of a high percentage of hot metal and by about $1.10 in the case of an all-scrap charge.

All the primary steel producers in New England make steel in open hearth furnaces using primarily a cold scrap charge. Since there is no large integrated steel mill in the New England area, this area is a net exporter of scrap. The present price of electric furnace scrap in Boston is $32.25 per 2,000-pound ton. Since New England normally exports some 700 thousand to one million tons of scrap a year, the price would not rise materially, even though a small steel plant using an all-scrap charge were to be established in New England.

A merchant rolling mill such as might be used in the suggested plant could produce 400 tons of finished product a day, or 140 thousand tons a year, of finished steel. Of course, it would be possible to operate the plant at a much reduced rate, but for purposes of calculation a rate of 400 tons per day has been assumed. A steel plant and rolling mill to produce this 400 tons a day would cost approximately $14 million, of which $11 million would be invested in machinery and equipment and the remainder in buildings, land, miscellaneous property and site development. About $5 million of this total investment would be represented by the merchant mill and accessory equipment, including reheating furnaces, cooling pits, and warehouse and shipping facilities.

### *Future Possibilities*

The dynamic performance of the metals industry in New England, in contrast with the declining importance of the nondurable-goods industries, has established a pattern which is likely to continue in the future. The performance of the metals group can improve significantly if this region gains a small specialty steel mill to supply the needs of metal fabricators in this region. It is probable that many of these user industries would expand if there were specialty steel available from a local mill at costs equal to or lower than present costs. Past experience in Utah, for example, has shown this to be true when the Geneva plant began producing.

There are a number of small fabricators in New England who would not be in a position to place large orders directly with the mill and would find it to their advantage to purchase through a steel warehouse. With a current Boston warehouse price of $121 per ton and assuming some sales at the mill price, the average realized price would be about $106 per ton of finished steel. The differential of $30 per ton between the projected New England mill manufacturing cost and the average realized price makes it appear that the inclusion of warehousing facilities in the New England mill might be considered as a profitable extension of activities. A warehousing operation would provide added flexibility in distribution, and it would be a means of supplying a full line of steel types and shapes to supplement the limited range of products produced by a plant itself. This could be an important advantage, since many companies prefer to purchase all their steel needs from the same source.

Further development of Liberian, Labrador, and South American ore bodies may influence future processing techniques. An electric furnace on a tidewater location might find it advantageous at some future time to change from an all-scrap base to a mixture including a proportion of high grade iron ore.

Another consideration in the establishment of a small specialty steel mill is the up-grading of the end products through further diversification. The warehousing of steel is one possibility. Integration of the steel-producing plant with a manufacturing company might also be considered as a means of up-grading the product and increasing the profit margin.

# Our 1953 Bread and Butter Bill

LOOKING AHEAD into 1953, the United States Bureau of Agricultural Economics expects that retail food prices will average about the same as in 1952.[1] This expectation rests on two principal assumptions: (1) that the anticipated large crops next year will materialize and (2) that the international situation will not worsen.

With heavy defense expenditures and a high level of employment forecast through the first half of next year, consumer income is expected to creep to a slightly higher level in the first six months of 1953 than in 1952. This high level of income will exert an upward pressure on retail food prices.

Offsetting the upward pressure are the prospects of as favorable an over-all food supply in 1953 as that in 1952. Turkeys, eggs, butter, some cereal products, dry beans and peas, and canned vegetables will probably retail at higher prices next year, but beef, veal, chicken, fish, frozen fruit juices, and fresh vegetables may sell for somewhat less than in 1952.

In 1952, Americans consumed more of the so-called "protective" foods such as dairy products, leafy green and yellow vegetables, citrus fruits, and meat and poultry products, continuing a trend started in the early war years. The increased consumption of these foods, coupled with the enrichment of grain products that first became important during World War II, greatly increased the nutritive quality of the average diet. With continued high consumer income in prospect for 1953, this trend will probably continue.

If the international situation does not worsen, the Bureau of Agricultural Economics does not expect the volume of military procurement of food to exceed that of 1952. Exports of food during the fiscal year 1952-53 are expected to decline because of the large harvests and the dollar exchange problems in many countries. The 23,642,000 tons of food exported in 1951-52 were nine per cent larger than the amount exported in 1950-51 and within four per cent of the record 1948-49 level of food exports.

The larger meat supply now coming onto the market is partially a seasonal rise, but it also reflects the drought in the range country and the larger number of animals ready for market. Beef herds have increased markedly during the past five years. The larger marketings of beef have already been reflected in lower prices to the farmer, but the more sluggish retail prices have not yet fully reflected the increased supplies. The outlook for 1953 is for somewhat lower beef and veal prices, with pork prices averaging about the same as in 1952.

The estimated per capita consumption of chicken in 1952 is 29.5 pounds, one pound short of the 1943 record, while consumption of turkey meat per person is expected to reach an all-time high of 5.6 pounds in 1952. Supplies of poultry meat in 1953 will likely be as large and possibly larger than in 1952. Retail poultry prices will probably continue near present levels in spite of increased supplies of beef and veal.

The smaller number of layers on farms will lead to a drop in egg production in 1953, according to the Bureau of Agricultural Economics. Although there will be more competition from the increased supplies of beef, the anticipation is for higher egg prices in 1953.

Ample supplies of fresh, frozen, and canned fish are in prospect for 1953. Although per capita consumption of fish is expected to be somewhat higher than the estimated 1952 level of 11.4 pounds, larger fish supplies plus lower beef prices are likely to offset the increased demand. Retail fish prices may average lower in 1953 than in 1952.

In New England, the retail price of milk is closely tied to the general price level, to the disposable income of New England consumers, to milk production costs, and to the volume of production. While the outlook for the first three factors would suggest higher retail milk prices next year, the larger anticipated volume of milk will probably offset them unless declining costs increase. Retail milk prices are expected to remain at, or slightly below, the 1952 level.

The 1953 vegetable supply will probably be larger than in 1952. The total canned vegetable pack in 1952 may be 15 to 20 per cent less than the 1951 pack, but indications are for another large frozen vegetable pack this year. Considering the present inventories of canned and frozen vegetables, supplies should be ample at about the same retail prices as in 1952.

If weather conditions are normal, the high fresh vegetable prices this year should lead to larger supplies in 1953. This is especially true of potatoes. The high prices last spring encouraged a 30 per cent acreage increase in Maine. While the summer drought reduced yields, substantially more potatoes were harvested in 1952 than in 1951.

Potato prices this winter, according to the Bureau of Agricultural Economics, will be lower than those of last winter, but it does not appear that they will decline to previous low levels. A larger harvest of potatoes this fall, coupled with a larger anticipated crop of early potatoes, should maintain an ample supply.

Supplies of frozen fruits and fruit juices point to expected record levels during the next year. Larger packs of concentrated frozen orange juice are anticipated. Supplies of canned fruits and fruit juices are expected to be slightly less than in 1952 due to smaller inventories. Fresh fruit supplies will apparently be substantially the same as a year earlier, with the smaller volume of apples, cranberries, and grapes offset by the larger prospective supplies of fresh citrus fruits. Retail prices of all fruits are expected to average about the same in 1953 as in 1952.

As a result of compensating price increases and decreases, it appears that consumers will experience food costs at about the same level in 1953 as they have in 1952. The downward trend in farm prices is expected to continue in 1953. Most of the decline will probably be absorbed by increased marketing and transportation charges; it is not likely that it will be passed on to the consumer in lower retail food prices.

[1]This article is based largely on the Oct.-Dec. 1952 issue of *The National Food Situation*, United States Bureau of Agricultural Economics.

# Expansion of Industrial Activity Slows Down

OCTOBER proved to be another brisk month for business activity in New England, although the rate of expansion appeared to be slowing down. Both the metalworking and soft-goods industries operated at high levels, while construction contractors continued to be busy. People throughout the region seemed to be able and willing to spend money, and sales at department stores ran higher than a year ago.

Industrial and commercial employment in New England reached a new high for the year in September, and stood 0.4 per cent above the total in September 1951. Weekly hours of work in manufacturing averaged slightly longer than a year ago, while weekly earnings gained 5.9 per cent. Unemployment insurance claims ran 30 per cent below year-ago levels in September, and 38 per cent lower during the first three weeks of October.

Factory production continued high in October, although the expansionary force of recent months began to weaken. The rise in new orders also lost some momentum. In the September survey of the New England Purchasing Agents Association, 45 per cent of the respondents reported a rising level of new orders. This group comprised only 39 per cent in October. There was a moderate shift in the composition of order backlogs away from direct defense work.

Loan volume reflected the recent moderation of the business uptrend in New England. Commercial, industrial, and agricultural loans outstanding at weekly reporting member banks in District I expanded rapidly in September and at a slower rate in October. The rate of loan expansion for the period from July through October was about equal to that in the nation.

Reports from a sample of member banks indicate that loans to the textile, apparel, and leather industries expanded steadily during July and August. Net repayments occurred subsequently and were particularly heavy in October. During this period the shoe centers were finishing up a long and successful fall run. The usual seasonal dip was expected to be mild, despite the appearance of shortened work weeks and some layoffs. A seasonal slackening of activity also began to affect the apparel industry in late September and October.

Increased textile activity supported the total of loans to major soft-goods industries. New England textile employment climbed for the fourth consecutive month in September. Rehiring continued in the main divisions of the industry, but at a slower pace than previously. It appeared that the revival was short of earlier expectations. Although the mills employed 11,800 fewer workers in September than a year ago, occasional shortages of skilled help cropped up and some occupational shifting of textile workers was evident. Textile activity continued to improve during October, though unemployment in the large textile centers remained high.

Loans outstanding to the metal and metalworking industries apparently contracted in August and September but expanded in October, according to the sample of member banks in District I. Regional statistics for September indicated a rising production trend in the electrical machinery and transportation equipment lines. Jewelry employment in Rhode Island jumped to a record level for any September. These expanding lines offset some easiness in primary and fabricated metals and non-electrical machinery.

Building activity in New England continued at a high level throughout the fall season. The value of total construction contracts awarded in September was 28 per cent greater than a year ago, according to the F. W. Dodge Corporation. Nonresidential building contracts registered a 40 per cent gain dollarwise over the level in September 1951, while the value of residential awards advanced 12 per cent. A nine-month cumulative comparison with 1951 showed a 12 per cent decrease in nonresidential contract awards. Declining activity in the region was concentrated in the "manufacturing" and "hospital and institutional" categories.

Sales at department stores in New England picked up during October. A sample of 45 stores in the region reported a dollar volume of business in the four weeks ending October 25 that was 5.4 per cent greater than a year ago. Improvement occurred throughout the region, but it was particularly notable in the metropolitan Boston, Lowell-Lawrence, and Springfield areas.

Prices for the average Massachusetts consumer were a bit lower in October. The retail price index for large Massachusetts cities declined slightly for the second consecutive month as the downward trend in average food prices continued. The combined index stood 2.4 per cent higher than a year ago, and about 12 per cent above the pre-Korea level.

The daily B.L.S. price index of 28 basic commodities on the spot markets and organized exchanges declined about three per cent during October. Late in the month the index was 16 per cent lower than a year ago and only 6 per cent higher than the pre-Korea index.

**NEW ENGLAND MEMBER BANK CONDITION**
**September 5, 1952 vs. June 30, 1952**
(Amounts in Thousands of Dollars)

| | BOSTON | | OTHER FIRST DISTRICT BANKS | |
|---|---|---|---|---|
| | September 5, 1952 | % Change from June 30, 1952 | September 5, 1952 | % Change from June 30, 1952 |
| *Total Assets:* | $2,615,378 | — 3.1 | $4,582,835 | — 0.9 |
| **Total reserves, cash and balances** | **$ 607,171** | **— 6.9** | **$ 921,849** | **— 9.3** |
| **Total investments** | **$ 933,612** | **— 5.9** | **$2,084,059** | **+ 1.5** |
| U. S. securities | 756,628 | — 8.3 | 1,695,305 | + 1.8 |
| Other securities | 176,984 | + 6.0 | 388,754 | + 0.1 |
| **Total loans and discounts** | **$1,015,687** | **+ 2.1** | **$1,507,247** | **+ 1.4** |
| Commercial and industrial loans | 714,201 | + 1.9 | 589,224 | + 0.2 |
| Real estate loans | 99,515 | +14.9 | 457,462 | + 1.3 |
| Other loans to individuals | 138,459 | + 3.0 | 397,866 | + 2.0 |
| All other loans | 84,084 | —10.1 | 86,540 | + 7.1 |
| Reserve for bad debt losses, etc. | —20,572 | — 0.1 | —23,845 | + 0.4 |
| **All other assets** | **$ 58,908** | **— 3.6** | **$ 69,680** | **+ 6.2** |
| *Total Liabilities and Capital Accounts:* | $2,615,378 | — 3.1 | $4,582,835 | — 0.9 |
| **Liabilities** | **$2,370,024** | **— 3.6** | **$4,225,450** | **— 1.0** |
| Demand deposits | 2,105,942 | — 4.7 | 3,006,375 | — 2.7 |
| Time deposits | 188,539 | + 2.6 | 1,151,714 | + 1.1 |
| All other liabilities | 75,543 | +19.8 | 67,361 | +66.9 |
| **Capital Accounts** | **$ 245,354** | **+ 1.2** | **$ 357,385** | **+ 1.1** |

# Vacation Season Sets Records and Poses Problems

THE 1952 SUMMER SEASON was the best in postwar years for most New England resort areas. Record numbers of vacationers took advantage of nearly ideal weather conditions to visit mountain, lake and beach resorts. Proprietors of vacation lodging places who report to the *New England Vacation Business Index* entertained about seven per cent more guests during the five-month period from May through September this year than they did in the corresponding months of last year. This increase in the number of guests plus higher rates at many establishments boosted gross receipts of all reporting lodging places nine per cent above those in the same period a year ago.

Lodging places which cater primarily to long-staying guests, such as hotels, inns and cottage resorts with central dining facilities, reported year-to-year gains of six per cent in guest occupancy and nine per cent in receipts for the May to September period. Tourist lodging places, such as guest houses, cabin colonies, motels and housekeeping cottages, recorded slightly higher gains of seven per cent in occupancy and ten per cent in receipts for the same months.

These five-month totals reflect the over-all success of the summer season, but they fail to show some of the trends in vacation lodging business which present problems for New England resort operators in coming seasons. Of particular importance to members of the industry in planning for future promotions are the monthly variations which occurred in the rate of business growth. The largest gains occurred in early-season business, as shown by the accompanying chart. As the summer progressed, the rate of growth decreased month by month. By September, the combined occupancy of all lodging places barely equalled that of a year ago.

Some of the disparity between the May and September comparisons undoubtedly resulted from the way holiday week-ends fell this year. Memorial Day came on a week-end for the first time since 1949 and helped to swell the totals for May. Labor Day, on the other hand, came so early this year that two days of the week-end fell in August, whereas last year the entire week-end was credited to September.

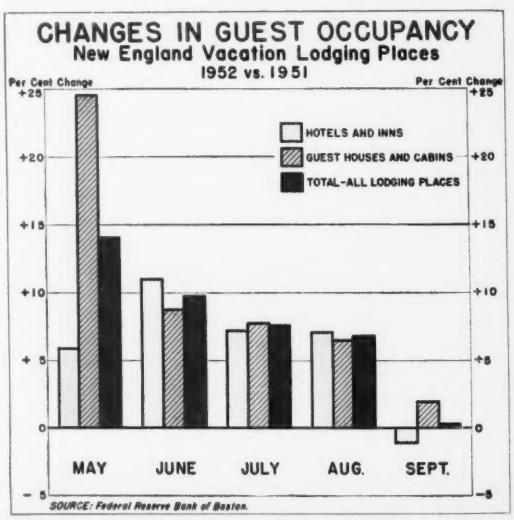
These vagaries of the calendar account only partially, however, for the downward trend throughout the summer. For several years, vacation business at New England resorts has slowed perceptibly in the closing days of August. This year the drop was more pronounced and seemed to carry through September in many areas. Some resort proprietors cited a growing reluctance of the vacationing public to venture on crowded highways over holiday week-ends as being partly responsible for the decline. Whatever the cause, the recurring nature of the weakness suggests a need for more promotional efforts to build up late August and September business.

On the brighter side, reports of exceptionally heavy traffic in the mountain areas over the Columbus Day week-end indicate that lodging places which remained open for the fall foliage tours probably enjoyed a marked upturn in business. Some proprietors may have lost out by closing earlier than usual because of disappointing September business.

### *Changing Vacation Patterns*

The changing preferences of vacationers from year to year present many additional problems for resort operators who are making plans for future seasons. Many such changes were evident throughout the industry this summer. Some were a continuation of trends from previous years and others seemed peculiar to this year.

Touring vacations continued to increase in popularity. People traveled around more than in past years and made shorter stays at each place. The increase in transient business was accompanied by a slowing down in reservation business. Many lodging proprietors who normally do a large proportion of reservation business found this year's vacationers failing to make reservations until the last minute, if at all. Fortunately for most of them, off-the-road tourists more than made up for the lack of reservations. However, lodging places remote from well-traveled highways were at a distinct disadvantage in attracting transient business, and some of them reported fewer guests than a year ago.

The surge in vacation travel brought increased patronage of all types of lodgings, but the greatest increase in demand seemed to be for cabin accommodations — particularly for those with cooking facilities. Guest houses fared less well than most types of lodging places, and many operators blamed their relatively poor showing on increased competition from recently constructed cabins and motels.

Although total vacation expenditures reached record levels, individual spending reflected the same note of caution which has characterized consumer buying in general this year. There were many reports that economy-minded vacationers shopped around for good accommodations at bargain rates and cut down on spending for nonessentials.